State of California – The Resources Agency ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF FISH AND GAME
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Mr. John Robertus, Executive Officer
San Diego Regional Water Quality Control Board
9771 Clairemont Mesa Blvd, Suite A
San Diego, CA 92124-1331

Subject: Tentative National Pollutant Discharge Elimination System (NPDES) Permit for Southern California Edison San Onofre Nulcear Generating Stations Units 2 And 3 Order Nos. R9- 2005-0005 AND R9-2005-0006 PERMIT Nos. CA0108073 and CA1088181

Dear Mr. Robertus:

Department of Fish and Game (Department) staff have reviewed tentative Order Nos. R9-2005-0005 and 006 for the renewal of the NPDES permit for the cooling water discharges to the Pacific Ocean from Units 2 and 3 of the San Onofre Nuclear Generating Station (SONGS). The tentative permit would allow for the discharge of up to 1,219 million gallons per day (mgd) of cooling water to the Pacific Ocean from each unit. As a result of our review, the Department has the following concerns, comments and recommendations.

Thermal Plan exceptions

It is our understanding that Southern California Edison (SCE) has requested that the thermal effluent limitations for Units 2 and 3 be amended in a manner that would allow additional heat treatments to occur. The fact sheet also indicates that SCE has "requested that compliance with for Unit 2 and 3 discharge specifications for residual heat be determined by a daily average temperature calculation instead of an instantaneous maximum temperature measurement as compliance for daily thermal discharges." The fact sheet also indicates that Regional Board staff has determined both these requests to be new requests for exceptions to the Thermal Plan and as such SCE will need to undertake procedures established by Section 316(a) of the Clean Water Act and the Thermal Plan to seek new exceptions. The Department concurs with staffs' determination.

Compliance with 316(B) Impingement and Entrainment Issues

SONGS Units 2 and 3 have been in operation since the 1983. Billions of gallons of water have flowed through these facilities. Associated with these flows are the marine organisms that utilize this water as their habitat. Fish, macro-invertebrates, zooplankton, and phytoplankton all share this water with the power plant. In order to determine if the power plant's intake structure and technology are having an effect on these organisms as well as determine compliance with the new Section 316(b) regulations of the Clean Water Act, SCE is required to complete studies

to address impingement and entrainment effects caused by the intake of cooling water from the Pacific Ocean.

According to the fact sheet "pursuant to Section 125.95(b)(1) of the new 316(b) rule, the draft permit requires that SCE perform a Comprehensive Demonstration Study to confirm that the power plant meets the performance standards of the rule. The new rule allows the discharger up to four years to demonstrate compliance with the requirements of the new rule. The draft permit indicates that the Comprehensive Demonstration Study will be due no later than January 9, 2008. SCE is also required to submit a Proposal for Information Collection prior to submittal of the Comprehensive Demonstration Study. The Proposal for Information Collection will be due no later than 180 days after adoption of the tentative Order".

Pursuant to Section 125.94(a) of the new rule (Compliance Alternatives), the discharger must select and implement one of five alternatives to comply with the rule. The five alternatives summarized below establish best technology available for minimizing entrainment and impingement impacts:

(a) The discharger may demonstrate that the flow from the power plant will be reduced to commensurate with a closed cycle re-circulating system or that the maximum through-screen design intake velocity will be reduced to 0.5 ft/s or less.

(b) The discharger may demonstrate that the existing design and construction technologies, operational measures, and/or restoration measures meet the performance standards specified in Section 125.94(b) of the rule and/or the restoration requirements specified in Section 125.94(c) of the rule.

(c) The discharger may demonstrate it will install and properly operate and maintain, design and construction technologies, operational measures, and/or restoration measures that will, in combination with any existing design and construction technologies, operational measures, and/or restoration measures, meet the performance standards specified in paragraph (b) of this section and/or the restoration requirements in paragraph (c) of this section.

(d) The discharge may demonstrate that it has installed, or will install, and properly operate and maintain an approved design and construction technology in accordance with Sections 125.99(a) or (b) or the rule.

(e) The discharger may demonstrate that it has selected, installed, and is properly operating and maintaining, or will install and properly operate and maintain design and construction technologies, operational measures, and/or restoration measures that the Regional Board has determined to be the best technology available to minimize adverse environmental impact for the power plant (based on a site-specific, best technology available, cost analysis conducted in accordance with Section 125.94 (a)(5)(i) or (ii) of the rule).

SCE is also required to submit a Proposal for Information Collection prior to submittal of the Comprehensive Demonstration Study. The Proposal for Information Collection as required by Section 125.95(b)(1) of the rule must include the following information:

(a) A description of the proposed and/or implemented technologies, operational measures, and/or restoration measures to be evaluated in the Study.

(b) A list and description of any historical studies characterizing impingement

mortality and entrainment and/or the physical and biological conditions in the vicinity of the cooling water intake structures and their relevance to this proposed Study. If the discharger proposes to use existing data, it must demonstrate the extent to which the data are representative of current conditions and that the data were collected using appropriate quality assurance/quality control procedures;

(c) A summary of any past or ongoing consultations with appropriate Federal, State, and Tribal fish and wildlife agencies that are relevant to this Study and a copy of written comments received as a result of such consultations.

(d) A sampling plan for any new field studies the discharger proposes to conduct in order to ensure that there is sufficient data to develop a scientifically valid estimate of impingement mortality and entrainment at the site. The sampling plan must document all methods and quality assurance/quality control procedures for sampling and data analysis. The sampling and data analysis methods proposed must be appropriate for a quantitative survey and include consideration of the methods used in other studies performed in the source water body. The sampling plan must include a description of the study area (including the area of influence of the cooling water intake structures), and provide a

taxonomic identification of the sampled or evaluated biological assemblages (including all life stages of fish and shellfish).

The Department believes that previous studies have provided evidence that thermal, entrainment and impingement impacts are being realized as a result of the operation of the SONGS Units 2 and 3. The fact sheet recognizes this and indicates that the California Coastal Commission amended its Permit No. 6-81-330-A to impose mitigation requirements for these impacts. Although certain aspects of these studies need to be improved and additional studies will be required to further delineate these impacts (in particular the entrainment impacts), it seems that a strong effort should be put towards completing the components of the Comprehensive Demonstration study that deal with technology alternatives and more importantly restoration/mitigation measures.

Once the impacts are properly characterized and if the impacts can't be resolved by technological fixes then the next logical step is to develop restoration/mitigation measures. The Department, therefore, recommends that the draft permit be amended to require a more concerted effort be made to develop the restoration aspect of the Comprehensive Demonstration Study. We further recommend that the time frame for completing such efforts be expedited. The Department further recommends that if restoration is required then the approved restoration measures be initiated as soon as possible but no later than three years from approval. The Department requests that we be included as a reviewing agency in any development of any such restoration measures.

The Department appreciates the opportunity to review the subject permits. We look forward to working with the Regional Board staff and SCE to ensure that adequate and appropriate restoration is developed and implemented.

As always, Department personnel are available to discuss our concerns, comments and recommendations in greater detail. If the Department can be of further assistance or should you have any questions, please feel free to contact Mr. William Paznokas, Staff Environmental Scientist, Department of Fish and Game 4949 Viewridge Avenue, San Diego, CA 92123 or telephone, (858) 467-4218.

Sincerely,

C.F. Raysbrook
Regional Manager

cc: William Paznokas
Marine Region, DFG